



Sunshine Education and Research Center
at the University of South Florida
CDC/NIOSH T42-008438

<http://health.usf.edu/publichealth/erc/>

Annual Report
July 1, 2013 - June 30, 2014

Summary

The Sunshine ERC at the University of South Florida is a regional resource for industry, labor, government and the public in the areas of occupational health and safety. The ERC continues to follow its goal of promoting workplace safety, health and well being through education, research, continuing education and outreach. Its academic programs include (1) industrial hygiene, (2) occupational health nursing, (3) occupational medicine residency, (4) occupational safety, and (5) occupational health psychology. For students, there is strong interdisciplinary coordination and a research experience. The Sunshine ERC has many partnerships including the OSHA 21d consultation and training institute programs at USF, other ERCs, and NIOSH.

Our highlights below illustrate our commitment to the trainee research experience, interdisciplinary activities and the collaboration with other institutions to promote workplace health and safety.

Next year, USF will continue to cultivate partnerships and collaborative relationships with regional OH&S programs; and continue to champion continuing education, outreach, training and research strategies that improve the practitioner's environment and meet their OS&H needs.

Relevance

To meet the needs of Florida and the southeast, the Sunshine ERC at the University of South Florida continues to train OS&H professionals in industrial hygiene, occupational health nursing, occupational health psychology, occupational medicine residency, and occupational safety to provide an array of services based on best practices using current evidence and research ultimately promoting workplace safety, health and well being. The SERC also provides continuing education outreach and hazardous substance training to workers and OS&H professionals in the community.

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SERC website: <http://health.usf.edu/publichealth/erc/index.htm>

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Highlights

Research Experience: Many of our trainees published papers as well as made presentations at national and statewide professional meetings. Interdisciplinary research experiences are encouraged. Once again, the ERC trainees highlighted their research experiences through the 2014 Research Day activities and to network with other OHS students in the region. The activities included a reception on Thursday night with our guests from the University of Puerto Rico, Florida International University, University of Florida and Embry-Riddle Aeronautical University. There were 30 poster presentations on Friday morning, followed by lunch and then a safety-oriented tour of Busch Gardens. Finally, there was a networking picnic on Saturday morning.

(http://health.usf.edu/publichealth/erc/Research_Day_2014.htm)

Summer Institute: Outreach and NORA activities are central elements of the SERC. In June 2012, the SERC and College of Public Health initiated the first annual collaborative Summer Institute in Occupational Health and Safety. The goal of the weeklong program was to introduce participants (specifically undergraduate students) to the disciplines of occupational health and safety through informative lectures, hands-on laboratory sessions, and site visits to local industries. The third Summer Institute hosted 10 students. The overall evaluation of the summer institutes have been very positive and achieved the goal of reaching and educating undergraduate students about the field of occupational health and safety and the disciplines of industrial hygiene and safety, career options, and job opportunities as well as specific educational opportunities at the USF Sunshine ERC.

(http://health.usf.edu/publichealth/erc/SERC_Institute_2014.htm)

Regional Activities: Along with sister ERCs in Alabama (Deep South Center) and North Carolina (North Carolina ERC) and with NIOSH, the Sunshine ERC organized a symposium at the Workers Compensation Institute and Florida Safety Conference in Orlando.

In response to a NIOSH concern about the capacity of states to collect work-related injury and illness data, in 2011, the Southeastern Occupational Network (SouthON) was formed to focus on occupational health and safety in the southeastern US including ten state health departments (Kentucky, North Carolina, South Carolina, Virginia, West Virginia, Georgia, Florida, Mississippi, Alabama, and Louisiana) and the four Education and Research Centers (Florida, North Carolina, Alabama, and Kentucky), CSTE, and OSHA. SouthON covers topics related to injuries and fatalities in the southeastern regions and how the partners can work together. The major goals of SouthON are to: 1.) build relationships with occupational health partners, 2) provide tools to build capacity in states in the SE, 3) promote collaboration, and 4) foster research and worksite interventions. SERC trainees attended these high value interdisciplinary annual meetings.

(<http://health.usf.edu/publichealth/erc/SouthON.htm>)

Our trainees attended the Rocky Mountain ERC Young Investigators NORA meeting, a joint trip to the Pensacola Naval Air Station for an overview of the programs in aerospace and occupational medicine, and a training opportunity in heat stress as a combined SERC and Deep South ERC offering.

Outreach: The SERC lead by Dr. Candace Burns and the SERC Student Advisory Committee initiated a partnership with Johnson Controls (lead battery plant) and local professional organizations (e.g., American Heart Association, American Lung Association, American Diabetic Association) to provide health promotion education and screenings for employees during a one day health fair. Student trainees from each of the five SERC disciplines (i.e., industrial hygiene, occupational health nursing, occupational health psychology, occupational medicine residents

and occupational safety) worked side-by-side with volunteers from the community to provide the education and screenings. The screenings identified numerous high risk individuals (e.g., high blood pressure) that the onsite OHN followed via their primary care providers. Overall, the workers evaluated the experience very positively and the onsite OHN reported that the employees have become much more health conscious and initiated several health promotion activities throughout the subsequent year. Lastly, the SERC student trainees evaluated the interdisciplinary training experience very positively and it is now an annual event. See photo album at [Johnson Controls health fair](http://health.usf.edu/publichealth/erc/SERC_Inter_Init_2013-14.htm) as well as the website of all interdisciplinary activities at http://health.usf.edu/publichealth/erc/SERC_Inter_Init_2013-14.htm

Recruitment: In addition to the Summer Institute, we had 21 other recruitment activities that included laboratory tours and information sessions. Moreover, our SERC faculty and staff participated in recruitment activities at regional and national conferences.

Program Activities

Industrial Hygiene

ABET: The Industrial Hygiene Program has been reaccredited by ABET. The quality surveys, interviews, the self-study, and the feedback loops we employ as part of our ABET process assist with meeting NIOSH goals and maintaining the excellence of our program.

Papers & Chapters: A companion article to the one published in 2011 by Hammad and Pieretti on the design and calibration for gases of a human exposure chamber has been submitted to the journal Inhalation Toxicology and is in revision. This article deals with the generation of stable, known levels of respirable particles within in the chamber.

Also, faculty and students have written chapters for the new edition of the book: Hamilton and Hardy's Industrial Toxicology. Several chapters were written by faculty and students, including Y. Hammad, T. Bernard, and J. Garcia.

Graduate Positions: Recent MSPH graduates have obtained industrial hygiene positions with the City of Denver (K. Vogel), and Williams Energy (I. Iheanacho). Also, one PhD student (A. Marty) who was supported by NIOSH has a position arranged with the OSHA Consultation Program.

Student Presentations, Posters, and Other Academic Achievements: All industrial hygiene students present their thesis work at our NORA seminars (A. Marty, G. Johnson, D. Medina I. Iheanacho, K. Vogel). Also, two of our MSPH students presented posters at the Florida AIHA meeting (I. Iheanacho, K. Vogel), and three of our PhD students gave presentations at this meeting (A. Marty, M. Henderson, D. Medina)

We are pleased that all of our industrial hygiene students attended the AIHCE in San Antonio. At this conference, one student (K. Vogel) won the award for best student poster in his category, and another student (L. Riley) won the \$1000 American Industrial Hygiene Foundation Scholarship.

Community Outreach: Faculty continue to provide seminars and information relating occupational and environmental health to the community. R. Salazar has made several presentations on worker's compensation and industrial hygiene, and organized and conducted the Summer Institute in Environmental Health. T. Bernard has made presentations on heat stress. S. Mlynarek has provided information and advice regarding indoor environmental quality.

Occupational Health Nursing

MPH - Occupational Health for Nurses: A significant impact of the Occupational Health Nursing (OHN) program is the initiation of a new master's level track of a 44-credit hour "Master's in Public Health (MPH) - Occupational Health for Nurses". This now completes the current OHN program options and provides an educational track in response to needs assessment data and requests for an option for nurses who want to be prepared as advanced OHNs but NOT as nurse practitioners, i.e., MS / MPH Dual Degree OHN NP track - 80 credits and the MS (only) OHN NP track - 61 credits. The new track has a major focus on program management and leadership in occupational health nursing.

OHN Alumni and Student Achievements: Three former graduates were admitted to Doctorate in Nursing Practice (DNP) programs in Florida and Georgia, and one graduate was admitted to the PhD program at the University of Washington to pursue advanced specialty practice and research in occupational health nursing.

Students and faculty continue to co-author manuscripts focusing on the translation of occupational health and safety research to evidence-based advanced practice with four publications in 2013-2014.

Respiratory Protection and Occupational Health Nursing: Dr. Candace Burns provided leadership for a collaborative initiative with AAOHN and served as team leader during the period 2011 - 2014 that included a nation-wide study of the current level of knowledge and skills of OHN and their needs for education and training related to respiratory protection. She served as Co-PI on a grant funded by the NIOSH National Personal Protective Technology Laboratory (NPPTL) for two outcomes: 1) national level competencies for all occupational health nurses and 2) development of innovative online respiratory protection training and tool kit which is now available for free via AAOHN to all occupational health and safety personnel.

Occupational Health Psychology

Graduate Positions: Two trainees graduated and both accepted assistant professor positions in psychology departments. Ryan Johnson is at Ohio University and Zhiqing Zhou is at Florida Technological University. Three trainees entered the program, Maryana Arvan, Keaton Fletcher, and Derek Hutchinson.

Former trainee Kristin Saboe, a captain in the U.S. Army, is assigned to the Walter Reed Army Institute of Research where she studies PTSD and suicide. In fall 2013 she was deployed to Afghanistan to conduct research on stress among active duty soldiers. She recently published a paper on occupational mental health in *Current Psychiatry Reports*.

Former trainee Ashley Nixon, who is an assistant professor at Willamette University, published a journal article in *Human Performance* that was based on her doctoral dissertation, funded by a Pilot Research Project Grant from the Sunshine ERC.

Former trainee Liu-Qin Yang is an assistant professor at Portland State University, and is currently applying for tenure. She has published more than a dozen journal articles and two dozen conference papers since graduating from USF, most of them on stress and workplace violence.

Special Faculty Recognition: Program Director Paul Spector received the Academy of Management lifetime mentoring award in 2013. Deputy Director Tammy Allen was the President of the Society for Industrial and Organizational Psychology.

Occupational Medicine Residency

The Occupational Medicine Residency (OMR) had a total of six trainees for the annual reporting year July 1, 2013-June 30, 2014. As of June 30, 2014, three of our graduates have found employment: one is working as an OM physician for the California Permanente Group, one as Medical Director and MRO of 2 OM clinics for Baptist Community Health Services in Kentucky, and one as the Occupational Medicine Physician for Eli Lilly Pharmaceuticals in Indiana. The fourth remains on maternity leave.

As demonstrated by our graduates, the University of South Florida OMR continues to provide qualified residency trained Occupational Medicine Physicians to OM Clinics, Industry, the Armed Forces and Academics on a National, Regional and Local level. In 2014, we have expanded our Occupational Medicine clinic rotations to include Florida Hospital increasing diversity among clinical cases. In January, our first resident rotated with former USF OMR graduate Dr. Joette Giovinco "Dr. Jo" at Fox News in Tampa taping an entire health related segment on his own. In February we added a rotation in Quality Improvement and Patient Safety at James Haley VA Hospital.

The research experience continues to grow: there were 2 published manuscripts, 1 oral presentation, 7 abstracts presented at AOHC in the last three years and 8 abstracts in all. The ACGME milestones have been incorporated into the curriculum. There is an anticipated ACGME self-study date of March 1, 2017 as part of the next accreditation system. The OMR recruited and enrolled three trainees for the upcoming year.

Occupational Safety

Program Developments: The occupational safety program was expanded to include an MS in Engineering Management with a specialization in occupational safety.

Graduate: One graduate starting working in the field of OHS and decided to return to school for a PhD in community-based interventions.

Two students graduating later in 2014 have completed their research projects in heat stress and respirator program evaluation.

Continuing Education

During the 2013-2014 fiscal year 5,515 individuals were trained through the continuing education program. Training was provided through a variety of venues that include online courses (3,691 participants) as well as in-class (1,824 participants). The impact of this training is best described by stating that interested trainees can access the online classes (a total of 273 classes) any place in the US. The online classes are offered in collaboration with the USF OSHA Training Institute (OTI), an educational institute that has local, state, regional, and national reach.

The In-class training (a total of 41 classes) was offered at several locations in Birmingham, Alabama; in Lexington, Kentucky; and in Orlando, Tampa, and West Palm Beach, Florida. Several of the classes were the result of collaborative efforts between the Sunshine ERC, the Alabama Deep South ERC, the Central Appalachian Regional ERC, and the University of North Carolina ERC. The impact of this program is tangible in Region IV through collaborating with the ERCs and throughout the US through the online educational offerings.